

-2-

IN THE SPECIFICATION:

Delete paragraphs starting on page 8, lines 5 - 26; page 9, lines 1 - 26; and page 10, lines 1 - 4.

IN THE CLAIMS:

Please Amend Claim 1 to the following:

1. (Twice Amended) A method of inducing compression along the surface of a part comprising the steps of:

B1 selecting a region of the part to be treated;

selecting the magnitude of compression to be induced along the surface of the selected region;

exerting pressure against the surface of the selected region using an apparatus having a member for exerting the pressure against the surface of the selected region and a socket for receiving the member; and

supplying a constant volume flow of fluid to the socket such that the fluid flows over the member.

11. (Twice Amended) A method of inducing a layer of compressive stress in the surface of a part comprising the steps of:

B2 selecting a region of the part to be treated;

selecting the magnitude of compression and the residual stress distribution to be induced in the surface of the selected region;

programming a control unit to pass a burnishing member positioned within an inner chamber of a burnishing apparatus over the selected region in the selected pattern to produce a zone of deformation having a deep layer of compression within the surface;

programming the control unit to increase, decrease or maintain the pressure being exerted against the surface at selected points along the selected pattern and to vary the rate of increase and decrease of pressure to obtain the desired residual stress distribution and magnitude of compression

LRI-003PAT

-3-

b2 amended
within the surface; and

supplying a constant volume flow of fluid to the inner chamber such that the fluid supports the burnishing member.

b3
15. (Amended) A method of inducing a layer of compressive stress in the surface of a part comprising the steps of:

selecting a region of the part to be treated;

selecting the magnitude of compression and the residual stress distribution to be induced in the surface of the selected region;

programming a control unit of a burnishing apparatus to perform a burnishing operation, the burnishing operation being performed along the selected region in a selected pattern to produce a zone of deformation having a deep layer of compression within the surface having associated cold working of less than about 5.0 percent;

performing a second operation to induce a more shallow layer of compressive stress within the surface of the part to produce the desired stress distribution;

whereby said burnishing apparatus further comprising an inner chamber for receiving a burnishing member, means for supplying a constant volume flow of fluid into the inner chamber such that the fluid flows supports the burnishing member, and means for automatically adjusting the pressure being exerted against the surface of the selected region that increases on the high points and decreases on the low points that are encountered along the surface of the part during the burnishing operation.

REMARKS

The Applicant wishes to express his appreciation to Examiner Compton for his help during the telephone conference of January 17, 2002. Pursuant to Applicant's discussion with Examiner Compton, it is the Applicant's understanding the Claim 16 is now allowable. The Applicant respectfully requests that Claims 1, 11 and 15 as amended, now more clearly describe the subject invention and are now in better form for appeal. Accordingly, the Applicant respectfully requests that this Amendment of Claims 1, 11 and 15 be admitted.

LRI-003PAT